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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,010	09/30/2003	Jian Hui Yang	20341-73107	4847
23643	7590	10/15/2004	EXAMINER	
BARNES & THORNBURG 11 SOUTH MERIDIAN INDIANAPOLIS, IN 46204			BURNHAM, SARAH C	
			ART UNIT	PAPER NUMBER
			3636	

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/675,010

Applicant(s)

YANG ET AL.

Examiner

Sarah C. Burnham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4,6,7,9,11-21,24 and 25 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 2,3,5,8,10,22 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/18/03</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information referred to in the information disclosure statements filed on December 18, 2003 has been considered as to the merits.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

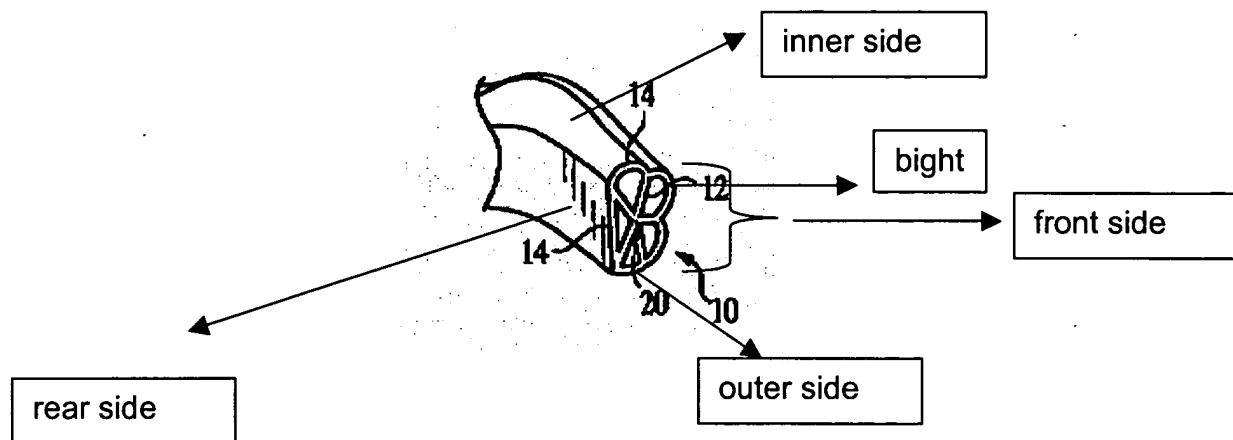
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 6-7, 9 and 11-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Rotheroe (US 2002/0152715 A1). Rotheroe discloses a tubular leg (10) (Figure 6c) including a front side, a rear side, a laterally outer side, and a laterally inner side, the front and rear sides defining a depth of the leg (10), the laterally outer and laterally inner sides defining a width of the leg, the width being larger than the depth, one of the front side and the rear side being formed to include a bight extending longitudinally along the leg to strengthen the leg.

With respect to claim 7, each of the laterally inner and laterally outer sides is semi-circular in cross-section, the rear side is straight in cross-section and extends from the laterally inner side to the laterally outer side, and the front side extends from

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the laterally inner side to the laterally outer side and is formed to include the bight. See labeled Figure below.



With respect to claim 9, each of the laterally inner and laterally outer sides is semi-circular in cross-section, the front side is straight in cross-section and extends from the laterally inner side to the laterally outer side, and the rear side extends from the laterally inner side to the laterally outer side and includes the bight. In the figure above, the side labeled "rear side" would become the front side and the side labeled "front side" would become the rear side.

With respect to claim 11, the front side is formed to include the bight (as is seen in the labeled Figure above).

With respect to claim 12, the rear side is formed to include the bight (as would be the case if the rear side and front side labels were reversed as in claim 9).

With respect to claim 13, the bight is U-shaped, as seen above given the curved outer portion and two relatively straight and parallel side portions.

With respect to claim 14, Rotheroe discloses a leg (10) formed to include a channel and a bight, the channel including spaced-apart first and second end edges that extend longitudinally along the leg, the bight interconnecting and protruding outwardly from the first and second end edges and extending longitudinally along the leg (10) to strengthen the leg (10). See the figure below, which contains additional labels.

With respect to claim 15, the channel and the bight cooperate so that the leg is tubular.

With respect to claim 16, the channel is oblong and C- shaped in cross-section.

With respect to claim 17, the channel includes a laterally outer side of the leg, a laterally inner side of the leg, and a rear side of the leg, each of the laterally outer and laterally inner sides is curved in cross-section, the rear side is straight in cross-section and extends from the laterally outer side to the laterally inner side, and the bight is formed in a front side of the leg and positioned midway between the laterally outer side and the laterally inner side.

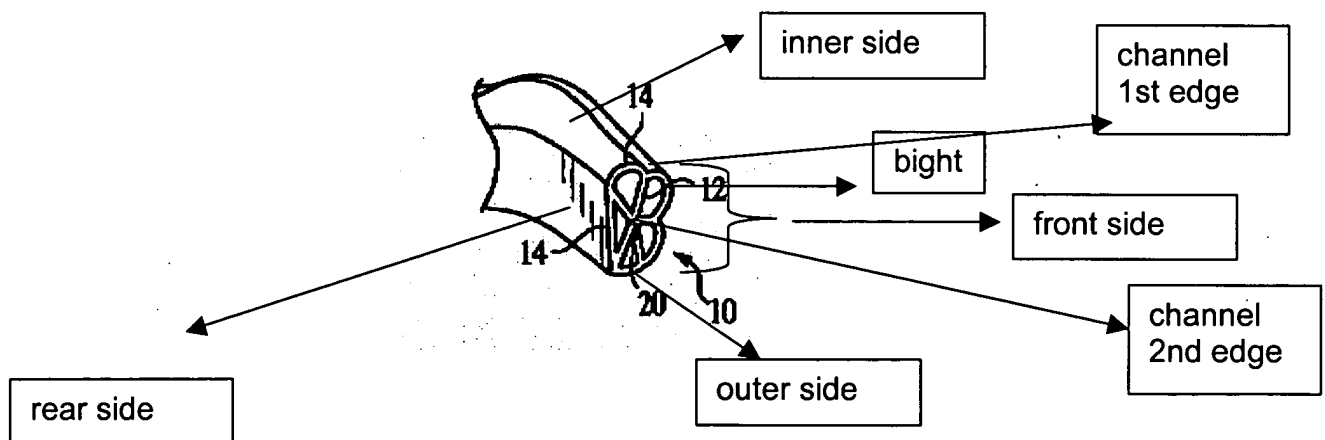
With respect to claim 18, the channel includes a laterally outer side of the leg, a laterally inner side of the leg, and a front side of the leg, each of the laterally outer and laterally inner sides is curved in cross-section, the front side is straight in cross-section and extends from the laterally outer side to the laterally inner side, and the bight is formed in a rear side of the leg and positioned midway between the laterally outer side

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and the laterally inner side. The front and rear side labels in the diagram below need to be reversed with respect to claim 18.

With respect to claim 19, the channel and the bight cooperate so that the leg has a depth and a width greater than its depth. As can be seen below, the distance between the inner and outer sides is greater than the distance between the front and rear sides

With respect to claim 20, the leg and the bight formed therein are bowed along their lengths. As can be seen below, the bight is curved along with the entire leg member (10).



### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 21 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US 2003/0234563 A1) in view of Rotheroe ((US 2002/0152715). With respect to claims 1, 4, 5, 21, 24 and 25, Huang discloses a chair comprising a foldable frame (1)(2)(3)(4) including a front leg unit (1) and a rear leg unit (2) the front and rear leg units be arranged to pivot with respect to each other about pivot point (12). Each leg unit (1)(2) comprises a pair of tubular legs as best disclosed in Figure 2. A chair back (4) and chair back mount (41) coupled to the chair back (4) and each front leg (1). Huang also discloses a foot (70) coupled to a bottom portion of each leg. Huang discloses all claimed elements with the exception of the particular tubular shape.

Rotheroe discloses a tubular leg (10) (Figure 6c) including a front side, a rear side, a laterally outer side, and a laterally inner side, the front and rear sides defining a depth of the leg (10), the laterally outer and laterally inner sides defining a width of the leg, the width being larger than the depth, one of the front side and the rear side being formed to include a bight extending longitudinally along the leg to strengthen the leg.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use a tube shaped like the one taught by Rotheroe to form the legs of the seat disclosed by Huang. The disclosed tubular shape has a superior "strength to weight ratio" [0003] which would allow for an extremely strong chair that is lightweight and easy to transport.

***Allowable Subject Matter***

6. Claim 2, 3, 5, 8, 10 and 22-23 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wycech 6,287,666; Ragsdale 2,007,898; Fuhrman 5,450,703; McKeon 6,349,521; Booth 2,401,542; Wen et al. (US 2003/0034676 A1); Peras 2,903,044; Christin 3,705,604); Kojima et al. 5,634,684; Kojima et al. 5,718,474.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah C. Burnham whose telephone number is 703-305-7315. The examiner can normally be reached on M-Th 7:30 am - 5:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on 703-308-0827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SCB  
October 12, 2004

  
Peter M. Cuomo  
Supervisory Patent Examiner  
Technology Center 3600